

DOCUMENT RESUME

ED 291 124

CS 506 050

AUTHOR Furio, Brian J.
TITLE The Relationship between Instructor Behaviors and Student Perceptions of Control in the Classroom.
PUB DATE [87]
NOTE 55p.
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC03 Plus Postage.
DESCRIPTORS Affective Behavior; Affective Measures; *Classroom Communication; Classroom Environment; Classroom Research; Cognitive Processes; Cognitive Style; Communication Research; Helplessness; Higher Education; *Student Attitudes; Student Motivation; *Teacher Behavior; Teacher Influence; *Teacher Student Relationship

IDENTIFIERS Affective Response; Communication Behavior; Control Analysis; *Control Perception; *Student Perceptions of Teacher

ABSTRACT

Employing learned helplessness theory as a trait orientation, a study examined the interrelationships existing between instructor classroom behaviors, student perceptions of control, and student behavioral responses in the college classroom. Subjects, 317 male and female undergraduate students who were enrolled in communication courses at West Virginia University, over a two day period, evaluated the class immediately preceding their communication class by completing a two-item measure of perceived control and a 24-item multidimensional-mutiattribute causality scale (MMCS) measure of achievement-related attributions. State measures included the modified Behavioral Indicators of Immediacy (BII) scale, teacher communication style (TCS), measures of teacher classroom learning aids, and learning (affective, cognitive, and motivational) measures. Results indicated that student perceptions of state control in the classroom were significantly related to both affective and cognitive learning; students perceiving lack of control over achievement-related behaviors demonstrated reduced affective and cognitive learning and reduced motivation to work and study. Findings suggest that the successful instructor is one who incorporates as many positive behaviors--such as eye contact, smiling, relaxed posture, and vocal variety--as possible, and makes students feel comfortable in a learning environment. (Three tables of correlation coefficients are included, and ten pages of references are appended.) (MM)

* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *

THE RELATIONSHIP BETWEEN INSTRUCTOR BEHAVIORS AND
STUDENT PERCEPTIONS OF CONTROL IN THE CLASSROOM

Brian J. Furio
Assistant Professor
York College of Pennsylvania

PERMISSION TO REPRODUCE THIS
MATERIAL HAS BEEN GRANTED BY

Brian J. Furio

TO THE EDUCATIONAL RESOURCES
INFORMATION CENTER (ERIC)"

Abstract

U S DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION
CENTER (ERIC)

This document has been reproduced as received from the person or organization originating it
 Minor changes have been made to improve reproduction quality

Points of view or opinions stated in this document do not necessarily represent official OERI position or policy

Research in the area of student perceptions of control in the classroom has revealed detrimental results. Students perceiving lack of control over achievement-related behaviors demonstrate reduced affective and cognitive learning and reduced motivation to work and study. Little research has been able to identify specific classroom variables impacting these dimensions of motivation, cognition, and affect. This study employed learned helplessness theory as a trait orientation to access these deficits in the classroom. State variables reflected instructor behaviors in the classroom. Results of this study indicate that trait perceptions of control account for 6.3% of the variance in perceived state control in the classroom. A larger percentage of the variance is accounted for by various state instructor behaviors. Relationships of these variables to student perceptions of state control in the classroom and subsequent relationships to cognitive and affective learning and student motivation are discussed.

5506050

Most human beings desire to have control over their environment. Perceived control helps to insure certainty of event outcomes. As perceptions of control decreases, uncertainty increases, as do feelings of anxiety and apprehension (Bandura, 1977; Kelley, 1971; Lazarus, 1966; Mandler, 1972). Learned helplessness (Abramson, Seligman & Teasdale, 1978; Maier & Seligman, 1976) is a line of empirical research identifying the behavioral responses to uncontrollability in the environment.

Learned helplessness studies with animals and humans have consistently demonstrated significant motivational, emotional, and cognitive behavioral deficits in the face of individual uncontrollability of event outcomes (Abramson, et.al., 1978; Ames, 1981; Buys & Winefield, 1982; Doyle, 1984; Hiroto & Seligman, 1975; Klein & Seligman, 1975; Maier & Seligman, 1976; Masserman, 1943, 1971; Overmier, 1968; Seligman, 1978; Seligman & Groves, 1970; Trice, 1984). In addition, learned helplessness research has identified similar behavioral effects across different contexts.

Similar behavioral effects have been demonstrated in interpersonal communication contexts (Beatty, 1986; Feinberg, Miller, & Weiss, 1983), organizational contexts (Argyris, 1957; Blauner, 1964; Cherniss, 1980; Stedry & Kay, 1966), and in the classroom (Chung & Hwang, 1981; Dweck, 1975, 1976; Dweck & Bush, 1976; Etaugh & Brown, 1975; Perry & Dickens, 1984; Wang & Stiles, 1976).

This study will focus on student perceptions of uncontrollability in the college classroom. Specifically, what interrelationships exist between instructor classroom behaviors, student perceptions of control in the college classroom, and student behavioral responses in the college classroom?

Theoretical Foundation

One assumption in social psychology is that individuals desire control over their behavioral outcomes and their environment. Kelly (1955) discussed the importance of control by comparing scientists to other human beings. Kelly argued that humans seek predictability and control in their environment just as a scientist seeks predictability in his/her environment. White (1959) suggested that individuals experience feelings of satisfaction or efficacy when they demonstrate control and influence on a stimulus field. White argued that learning diverse behaviors such as crawling and walking, attention and perception, and language are means by which children or animals effectively interact with their environment and attempt to derive control.

Kelley (1971) stressed the importance of control by arguing that humans, in attributing causes to behaviors, are not simply seeking knowledge but gaining knowledge to effectively manage themselves and their environment. Bandura (1977) theorized that individuals perceiving control of an event have little reason to fear that event. Ineffective control generates stress-inducing thoughts and maintains a high level of anxiety and arousal. The individual in control reduces the anticipated fear of an event thereby reducing stress, anxiety, and arousal.

In the late sixties, Seligman and his colleagues began a branch of empirical investigation concerned with identifying reactions to controllable and uncontrollable outcomes. Initially, the work began with animals and progressed to humans in the early seventies. This early work was responsible for the development of the learned helplessness theory of uncontrollable outcomes. Seligman and colleagues eventually demonstrated motivational, cognitive, and emotional behavioral deficits in man and animals following

exposure to uncontrollable outcomes.

Based upon nearly nine years of study, Maier and Seligman (1976) proposed the original learned helplessness theory of uncontrollable outcomes. The cornerstone of this theory is that "when an organism is faced with an outcome that is independent of his responses, he sometimes learns that the outcome is independent of his responses" (Maier & Seligman, 1976, p.17). The corresponding behaviors to the learning of response-outcome independence (noncontingent reinforcement) are a retarded initiation of voluntary responses due to the realization that responding is futile (motivational deficit), a belief in the inefficiency of responding and difficulty in learning success by responding (cognitive deficit), and depressed affect resulting from learning that outcomes are independent of responding (emotional deficits).

Research continued to validate the proposed theory (Brown & Inouye, 1978; Douglas & Anisman, 1975; Klein, Fencil-Morse, & Seligman, 1976; Seligman, 1978). However, studies indicating theoretical inadequacies (Klein, et.al., 1976; Roth & Bootzin, 1974; Roth & Kubal, 1975; Tennen & Eller, 1977; Thornton & Jacobs, 1972) and competing theories (Wortman & Brehm, 1975) prompted a reformulation of the original theory (Abramson, et.al., 1978).

Abramson, et.al. (1978) theorized that following exposure to uncontrollability and prior to the expectation of future response-outcome independence existed another step. At this step, the individual makes causal attributions to ask why they are helpless. The means to the reformulation was to incorporate the logic of Weiner's attributional analysis of achievement motivation (1972, 1974).

The reformulation suggests that the attribution one makes following the perception of noncontingency is an important determinant of subsequent

expectations for future noncontingency. In focusing on the added step to the model, the reformulation utilized three attributional dimensions: internal-external, stable-unstable, and global-specific.

When an individual believes that outcomes are more likely or less likely to happen to themselves than to relevant others, that individual attributes the outcomes to internal factors. If outcomes are believed to be as likely to happen to the self as to relevant others, external attributions are made.

Chronicity over time is assessed by the stable-unstable dimension which is orthogonal to the internal-external dimension. Stable factors are expected to be long-lived and recurrent while unstable factors are short-lived. Given that an individual learns that responses and outcomes are independent, he/she may attribute the noncontingency to (a) an internal-stable factor (ability), (b) an internal-unstable factor (effort), (c) an external-stable factor (context), or (d) an external-unstable factor (luck).

Generality of helplessness effects is determined by the global-specific dimension which is orthogonal to the other two dimensions. Attributing uncontrollability to a global factor implies that helplessness will occur across stimulus situations while attributions to a specific factor implies that helplessness will occur only in situations similar to the original stimulus situation.

Considerable empirical support exists for the reformulated theory of learned helplessness. Support has been demonstrated for the three dimensions of the theory (Adams & Dewson, 1982; Alloy, Peterson, Abramson, & Seligman, 1984; Ames, 1981; Anderson, 1983; Bowman, 1984; Doyle, 1984; Feinberg, et.al., 1983; Harris & Tryon, 1983; Kammer, 1983; Klein & Seligman, 1975; Koller & Kaplan, 1978; Seligman, 1978; Tiggemann, 1981; Trice, 1984) and for the

attributional addition to the theory (Ames, 1981; Anderson, Anderson, Fleming, & Kinghorn, 1984; Bar-Tal, 1976; Chung & Hwang, 1981; Hanusa & Schulz, 1978; Tennen & Eller, 1977; Weinberger & Cash, 1982).

Learned helplessness theory and the corresponding behavioral deficits have also been demonstrated in a number of distinct contexts. Feinberg, et.al. (1983) demonstrated verbal learned helplessness in social situations. Relatedly, Bandura (1977) and Mandler (1972) argue that perceptions of uncontrollability increase feelings of anxiety and arousal. If social helplessness causes social anxiety, the literature demonstrating the behavioral effects of such anxiety is plentiful. Those individuals demonstrating social-communicative anxiety are less self-disclosive (Miller, Berg, & Archer, 1983), less assertive (Bell & Daly, 1984), and less dominant (Mortenson, Arnston, & Lustig, 1977). These individuals see themselves as less competent and confident (Freimuth, 1976), anticipating greater nervousness and expectations of failure (Morris, Harris, & Rovins, 1981), and they expect more negative evaluations (Smith & Sarason, 1975) than individuals who do not demonstrate social-communicative anxiety (see, Daly & Stafford, 1984, for additional effects). Taken together, these results suggest a significant interpersonally communicative reaction to perceptions of uncontrollability.

Another context demonstrating the impact of learned helplessness is the organizational context. Not only do the previously mentioned interpersonal effects of helplessness relate to this environment but research has demonstrated specific organizational effects. Perceptions of uncontrollability in the organizational environment led to staff "burnout" (Cherniss, 1980), leadership struggles and competition (Schutz, 1979),

alienation (Blauuer, 1964), and reduced levels of productivity (Steady & Kay, 1966).

Finally, helplessness effects have been demonstrated in the classroom. Dweck and her colleagues (Diener & Dweck, 1980; Dweck, 1975, 1976; Dweck & Bush, 1976; Dweck & Licht, 1980; Dweck & Repucci, 1973) have demonstrated the effects of helplessness in children's classrooms. When failures occurred, the cognitions of helpless children dwelt on the present, the negative, and on escaping from the situation. Helpless children underestimated the number of problems they had solved, were less likely to attribute success to ability, and thought that other children would perform better than they. In addition, sex-related effects were demonstrated. Boys had higher expectations for success than girls and often attributed success to ability while girls attributed success to effort. Similar sex-related results have been demonstrated in college populations (Deaux & Farris, 1977; Etaugh & Brown, 1975; Rosenfield & Stephan, 1978; Stake, 1976).

Wang and Stiles (1976) found that second grade children given complete control over the ordering of tasks completed a significantly higher number of tasks than children whose tasks were ordered by the teacher. Buys and Winefield (1982) demonstrated learned helplessness in high school students following exposure to noncontingent rewards. While helplessness has been demonstrated to exist in the classroom, little direction has been afforded to identifying variables that may impact a student's perception of control in the classroom.

Rationale

Perry and Dickens (1984) argued that learned helplessness theory is a useful approach to studying perceived control in a college setting because it

defines a set of classroom conditions that may affect student perceptions of control. In addition, it provides a specific list of behavioral responses to perceptions of control. College students who perceive that their behaviors affect classroom outcomes may develop expectations of controllability over classroom events, exhibiting facilitative behaviors such as note taking, studying, questioning, or changing instructors. Students who do not perceive a relationship between their behaviors and their classroom outcomes are less likely to exhibit facilitative behaviors and may be prone to boredom, failure, apathy, and absenteeism.

Learned helplessness research has focused mainly on the elementary classroom. Although these results are significant, they may not be generalizable to the college classroom for a number of reasons. At the college level, there is an increased reliance on lecturing as the primary form of instruction and the student has a greater responsibility for his/her educational development (class attendance, study policies, test preparation, etc.). Tiggemann, Barnett, and Winefield (1983) empirically distinguished between failure and uncontrollability. They found that college students were ^{more} ^A susceptible to uncontrollability than high school students, who were more susceptible to failure. It is likely that by the time students reach the college level their expectations for the classroom are established. Perceptions of uncontrollability or unpredictability may be very unsettling. Adams and Dewson (1982) found that level of difficulty may effect the induction of helplessness. Collectively, these results suggest that research needs to focus specifically on college level classrooms due to low generalizability from other educational levels.

The review of literature has aptly demonstrated that an individual's

perception of control can influence one's motivational, cognitive, and emotional behaviors. More specifically, the review of literature has demonstrated the existence of learned helplessness in the classroom and the impact on the student motivational, cognitive, and emotional behaviors. Further, within the classroom literature there is clear identification of the existence of trait and state variables impacting student perceptions of control.

Based upon empirical results indicating a significant sex impact for failure attributions, Dweck and her colleagues discussed the possibility of helplessness as an induced trait. This work echoes the original discussion of a trait existence by Hiroto and Seligman (1975) who identified generalization of effect from instrumental training to cognitive testing. In fact, the existence of a helplessness "trait" is grounded in the actual learned helplessness theory. Given that a student has experienced uncontrollability in past classroom situations, he/she may make attributions for this uncontrollability to such factors as lack of intelligence (internal, stable, global) and lack of a specific ability, such as mathematical ability (internal, stable, specific). The theoretical assumption is that, in any environment, a percentage of an individual's helplessness will be impacted by the helplessness "trait". The amount of one's helplessness not attributable to a trait is likely attributable to state variables.

Some empirical support also exists for the impact of state variables. Variables such as level of content difficulty and amount of information transfer (Adams & Dewson, 1982) and amount of control over the ordering of tasks (Wang & Stiles, 1976) have been shown to impact levels of helplessness in the classroom. Perry, Abrami, and Leventhal (1979) and Abrami, Leventhal,

and Perry (1982) have demonstrated a significant positive relationship between instructor expressiveness and academic achievement in college classrooms. Perry and Dickens (1984) extended these results by demonstrating a positive relationship between instructor expressiveness and academic achievement in subjects exposed to contingency training. The authors argued that noncontingency reduced the student's ability to benefit from instructional variables in the classroom. This result adds credibility to the argument that perceptions of uncontrollability in the classroom are detrimental to student performance and learning. Other researchers have identified instructor variables impacting the classroom, such as skill, warmth, knowledge, enthusiasm, rapport, and organization (Doyle, 1983; Feldman, 1976; Frey, 1978) but, to date, none of these variables have been related to student perceptions of control in the classroom. Identifying additional state variables that potentially cause uncontrollability in the classroom is necessary.

Some potential state variables have been identified in the communication literature. In general, empirical results have demonstrated that the communication behavior of the teacher impacts affective and behavioral learning (see, for example, Kearney & McCroskey, 1980; Nussbaum & Scott, 1979). It can be argued then, that the communication behavior of the teacher may impact student perceptions of control in the classroom since impacts on affective and behavioral learning are manifested as outcomes in the model of learned helplessness. Two specific communication constructs that comprise teacher communication behavior and are state variables in the classroom are immediacy and teacher communication style.

Immediacy is defined as "the nonverbal behavior manifestation of high affect" (Andersen, 1979, p.545). The immediate individual communicates at

close distances and engages in more smiling, more eye contact, direct body orientations, body movement and gestures, touch, and vocal expressiveness. Andersen found immediacy to be a significant predictor of teaching effectiveness. Research has consistently demonstrated substantial, positive associations between teacher immediacy behaviors and student affect in secondary and college classrooms (Andersen, 1979; Andersen, Norton, & Nussbaum, 1981; Kearney, Plex, & Wendt-Wasco, 1985). In addition, nonverbal immediacy is represented in the instructor expressiveness research discussed earlier (Perry & Dickens, 1984). Among other characteristics, instructor expressiveness is defined as physical movement, voice inflection, and eye contact.

Teacher communication style (TCS) is a measure of student perceptions of teacher behaviors developed from the construct and measurement of social style (Buchholz, Lashbrook, & Wenburg, 1975; Merrill, 1974). TCS employs three dimensions--versatility, assertiveness, and responsiveness. Versatility is the perceived adaptiveness of the teacher to student needs and characteristics. Assertiveness refers to perceptions of teacher control in the classroom through the use of a dynamic delivery, vocal variety, and frequent gestures and movement. Finally, responsiveness is characterized by emotional, sensitive, social, understanding, and approachable behaviors.

Kearney and McCroskey (1980) demonstrated that students who perceived teachers as high in assertiveness, versatility, and responsiveness demonstrated greater affective and behavioral commitment toward the teacher, the class, and the subject content. In addition, Kearney and McCroskey found these results based only in student perceptions of teacher behavior. Teacher self-reported behaviors differed significantly from student reports. Since

this study is interested in student perceptions of teacher behaviors, this point is significant.

Given that student perceptions of uncontrollability in the classroom can be identified, we directly question the origin of those perceptions. If student attributions of uncontrollability reflect only internal (trait) origins, then state variables do not impact student perceptions of uncontrollability in the classroom. However, if internal attributions account for only a portion of the variance of student perceptions of uncontrollability in the classroom then state variables must also impact these perceptions. While teacher immediacy and teacher communication style are by no means the only teacher communication behaviors impacting state perceptions of uncontrollability in the classroom, they are representative of effective teaching behaviors. Also, these constructs are consistent with previous research on classroom variables impacting student perceptions of uncontrollability (e.g., instructor expressiveness). Identification of these constructs as state variables impacting student perceptions will provide a strong empirical base for future research. Therefore, the goals of this study are to (1) demonstrate the behavioral effects of uncontrollability and helplessness in the classroom, (2) identify the role of state variables in impacting student perceptions of uncontrollability, and (3) identify specific state variables in the classroom related to student perceptions of uncontrollability.

Research Questions and Hypotheses

The first concern of this study is to determine if, in fact, student perceptions of control are related to learning in the classroom. Specifically, learned helplessness theory predicts affective, motivational,

and cognitive learning deficits in the face of perceptions of uncontrollability. If student self-reported perceptions of state control are low then these students should demonstrate significantly lower levels of affective, motivational, and cognitive learning than students perceiving high control in the classroom. Based on this proposed relationship, the following hypotheses are advanced:

H1: Student perceptions of state control in the classroom will be significantly related to student perceptions of affect toward the course content, affect toward recommended course behaviors, and affect toward the course instructor.

H2: Student perceptions of state control in the classroom will be significantly related to student levels of motivation toward learning course content.

H3: Student perceptions of state control in the classroom will be significantly related to levels of cognitive learning of course content.

Given that learning is related to perceptions of control, the next step empirically is to determine what factors are related to perceptions of control in the classroom. Specifically, are there state variables impacting state perceptions of control in the classroom? If student trait attributions do not account for 100% of the reliable variance of state perceived control, then state perceived control must be influenced by state variables as well as trait variables. Therefore, the following research question is advanced:

RQ1: What percentage of the variance in student state perceived control can be accounted for by student trait attributions?

Given that learning is significantly affected by perceptions of control in the classroom and that state variables are related to these perceptions of control, it is important to identify the relationships between specific state variables and state perceptions of control in the classroom. Therefore, the following research questions are advanced:

- RQ2: What instructor immediacy variables are significantly related to student perceptions of control in the classroom?
- RQ3: What teacher learning aids are significantly related to student perceptions of control in the classroom?
- RQ4: What teacher communication style variables are significantly related to student perceptions of control in the classroom?

METHOD

Subjects

The subject pool consisted of undergraduate students enrolled in communication courses ($n=317$) during the spring semester of 1986 at West Virginia University. Involvement in the study was strictly voluntary. Students were both male and female and primarily between the ages of 18 and 22. Since communication classes are options among core requirements, students from a variety of majors and backgrounds were represented.

Procedure

Each student completed all specified instruments regarding their class most immediately prior to the communication class in which the study was conducted. This methodology ensured a variety of classroom settings,

instructors, and content within this sample. Assessment was conducted over two consecutive class meetings. Complete anonymity of response was guaranteed. On day one, students completed the first item of the two-item measure of perceived control and the twenty-four item MMCS measure of achievement-related attributions. Day one results identified trait orientations to helplessness. On day two, students completed the second item of the two-item measure of perceived control, ten items identifying teacher classroom learning aids, a modified BII immediacy scale, and the TCS scale. Day two results identified state perceptions of control and state variables impacting perceptions of control.

Measuring Instruments

Measure of perceived control (MPC). The MPC is a two-item instrument directly assessing perceptions of control in the classroom. Trait and state perceptions of control and comparisons to other classrooms can be assessed through this instrument. In addition, the two items account for the globality dimension of the learned helplessness theory which is not addressed in the MMCS. The instrument has face validity in that it directly addresses self-reported perceptions of control. Subjects self-report a control score between 0 (no perceived control) and 100 (complete perceived control). Low perceived control is operationalized as a score ~~of~~ one standard deviation or more below the sample mean. High perceived control is operationalized as a score of one standard deviation or more above the sample mean.

Trait Measures

Multidimensional-multiaffiliational causality scale (MMCS). The MMCS is a 48-item, Likert-type instrument developed by Lefcourt, van Baeyer, Ware, and Cox (1979). The scale consists of two 24-item goal-specific locus of control

scales, one concerning achievement and one concerning affiliation. For the purposes of this study, only the 24-item achievement scale was employed. Within the achievement scale, the items are balanced between 12 success and 12 failure experiences with the causal attributions balanced along internal-external and stable-unstable dimensions. Four 6-item scales assess internal-stable (ability), internal-unstable (effort), external-stable (context) and external-unstable (luck) attributions. Each scale is scored from 1 (strongly disagree) to 5 (strongly agree). Measures of internal consistency have been obtained. Cronbach alphas ranged between .58 and .80 for the achievement scale. Within this scale, internality (ability and effort) ranged between .50 and .77, while externality (context and luck) ranged between .66 and .88. Corrected Spearman-Brown split-half correlations ranged from .67 to .77. Test-retest correlations ranged from .51 to .62. In the present study, factor analysis of the MMCS provided both inconsistent and disturbing results. Instead of identifying four distinct factors (ability, effort, context, and luck), the initial factor analysis identified seven factors and, when forced into a four factor solution, only ability and luck were identifiable with factor loadings above .50. Forcing identification of the four original factors produced alpha reliabilities of .60 (ability), .59 (effort), .47 (context), and .69 (luck). The initial split-half reliability was .35. Combining ability and effort into an internal factor and context and luck into an external factor and forcing a two factor oblique solution produced alpha reliabilities of .23 (internal) and .60 (external) with an overall scale reliability of .09. These results suggested that internality and externality were orthogonally related to one another (consistent with results by Collins, 1974; Collins, Martin, Ashmore, & Ross, 1973; and Lefcourt, et. al., 1979).

Although the reliabilities of the four theoretical factors were within the range of original reliabilities assessed by Lefcourt, et.al. (1979), the split-half reliability and the internal and external scale reliabilities were relatively low. In a two factor rotated factor pattern, only 10 of the 24 items on the internal-external scale loaded above .50, which suggested interference from something other than the internal-external and stable-unstable dimensions. Further analysis, employing a rotated factor pattern and forcing a two factor solution, identified success and failure dimensions. This dimensionality was acknowledged by Lefcourt, et.al., (1979) in their original work but only to the point of demonstrating potential use for discrimination of behaviors by sex. Alpha reliabilities for these dimensions were .75 (success) and .69 (failure). The similarity between reliabilities of the success-failure and internal-external dimensions suggested that each was accounting for some unique variance in predicting attributions but that both were playing a role in the overall predictability of the MCSC.

Based upon this information, the scale was divided into eight subscales assessing each of the three dimensions. These subscales were ability-success (ABLS), ability-failure (ABELF), effort-success (EFFS), effort-failure (EFFF), context-success (CONS), context-failure (CONF), luck-success (LUKS), and luck-failure (LUKF). A rotated, four factor analysis of the 12 success items revealed significant loadings above .50 for ten of twelve items. Alpha reliabilities were .70 (ABLS), .60 (EFFS), .31 (CONS), and .61 (LUKS). Placing item 12 with both CONS and LUKS (loadings of .63 and .41, respectively) produced an alpha reliability of .47 (CONS). A rotated, four factor analysis of the 12 failure items revealed significant loadings above .50 for all 12 items. However, item 23, originally theorized as CONF, loaded

.72 with IUKF, and was moved to that subscale. Alpha reliabilities for these subscales were .58 (ABLF), .64 (EFFF), .46 (CONF with only 2 items), and .69 (IUKF with 4 items). Although these reliabilities are relatively low, they are acceptable given the low number of items in each subscale. Also, the consistency of low reliabilities for the context items (CONS and CONF) suggests that these items are in need of revision. Factor analysis results suggest that context items are perceived as luck items in many instances. A distinction must be made between these subscales to better represent the theoretical basis of the measure.

For purposes of this study, the eight subscales identified within the MMCS provided the trait attributions necessary for empirical analysis. However, while empirical analysis of trait attributions can be accomplished, the results of these analyses are suspect. The low reliability of the MMCS as a measure of trait attributions is cause for questioning the validity of the established trait relationships. In addition, results of this study indicate that few trait helpless individuals exist in the college classroom. Therefore, relationships between the few trait helpless individuals identified and the unreliable MMCS measure are also suspect. Based upon these reasons, the discussion of the role of learned helplessness as a predictor of state perceptions of control in the college classroom has been minimized. While the learned helplessness theory maintains relevance to this study through the demonstration of affective, motivational, and cognitive behavioral deficits, the relationships of state instructor behaviors and student perceptions of state control in the college classroom to these deficits will constitute the bulk of the discussion and interpretation of results.

State Measures

Measures of teacher classroom learning aids. Ten items directly assessed the instructor's use of classroom learning aids. The ten items identified instructor clarity, use of instructional materials and/or activities, instructor enthusiasm, instructor task-orientation, instructor encouragement of student questions and/or comments, instructor responsiveness to student questions and/or comments, use of cognitive objectives or goals, instructor criticism of student achievement, use of course syllabus, and difficulty of course content (Rosenshine and Furst, 1973). The computed alpha reliability for this measure was .77.

Modified BII immediacy scale. This measure is a modified version of the 15-item, Likert-type BII scale (Behavioral Indicants of Immediacy) developed by Andersen, Andersen, and Jensen (1979). The instrument is generated directly from the immediacy construct and assesses the behaviors of eye contact, vocal expressiveness, body orientation, body movement and gestures, smiling, and physical distance. Factor analysis revealed a unidimensional structure with loadings above .55. Split-half internal reliability coefficients ranged from .91 to .93. A recent study by Richmond, Gorham, and McCroskey (1986), employing this modified immediacy scale, found similar reliability results. In addition, construct validity with the BII measure was demonstrated. Results of the study showed that 50% of the learning variance was accounted for by total immediacy scores. These results mirror the shared variance results by Andersen, et.al. (1979). The alpha reliability of this measure for this study was .76.

Teacher communication style (TCS). The TCS is a 36-item Likert-type instrument developed by Krutson (1979) measuring student perceptions of

teacher versatility, assertiveness, and responsiveness. Split-half reliabilities were versatility (.74), assertiveness (.85) and responsiveness (.89). All scores were distributed normally. Alpha reliabilities of this measure for this study were .88 (versatility), .87 (assertiveness), and .87 (responsiveness).

Learning Measures

These measures were included to enable this study to demonstrate the existence of deficits in motivation and affective and cognitive learning and to correlate any deficits with student perceptions of uncontrollability.

Affective measurement. Student affect was operationalized in three ways in this study: affect toward course content, affect toward recommended course behaviors, and affect toward the course instructor. Each affect was measured by four, seven-point semantic differentials using the bipolar adjectives good-bad, worthless-valuable, fair-unfair, and positive-negative. In addition, student affect toward future behaviors in these same three areas was assessed using the bipolar adjectives likely-unlikely, impossible-possible, probable-improbable, and would-would not within the same differential framework. Previous use of these scales to identify student affect demonstrated internal reliability estimates ranging from .85 to .95 (Anderson, 1978; Andriate, 1980; Knutson, 1979). The alpha reliabilities of this measure for this study ranged from .86 to .98.

Cognitive measurement. Richmond, et. al., (1986) argued for the use of a subjective measure of cognitive learning since a solid, objective measure of cognitive learning applicable across subject matter areas was absent from the literature. This subjective measure consists of two items. The first asks subjects to estimate their amount of cognitive learning in a given class. The

second item asks subjects to estimate their potential amount of cognitive learning in the same class if they "had the ideal instructor". Both items are scored on a scale from zero (learned nothing) to nine (learned more in this class than any other). Subtracting the two scores yields a single "learning loss" score. The correlation between the learning loss score and the first item score alone was .94 (Richmond, et.al., 1986). The correlation between the learning loss score and the first item score for this study was .65.

Motivational measurement. Motivation was operationalized as the motivation to study course content. Subjects were asked to assess their motivation to study course content on the first class day and then to assess their present motivation to study the course content (two months hence). The difference score reflected any change in subject motivation to study the content. Subject motivation was measured by five, seven-point semantic differentials using the bipolar adjectives motivated-unmotivated, uninterested-interested, involved-uninvolved, dreading it-looking forward to it, and excited-bored. These measures of motivation have consistently demonstrated alpha reliabilities around .79 (Beatty, Forst, & Stewart, 1986; Beatty & Payne, 1985). The alpha reliabilities for this study were .89 for motivation to study course content on the first class day and .90 for motivation to study course content at the time of empirical assessment.

RESULTS

Hypothesis 1 was tested by correlational analyses and supported. Pearson r correlations between student perceptions of state control in the classroom and affect toward course content ($r=.28$, $p<.0001$), affect toward course-

recommended behaviors ($r=.35$, $p<.0001$), and affect toward course instructor ($r=.37$, $p<.0001$) indicate significant relationships between student perceptions of state control and student affect toward course-related behaviors. In particular, the relationship between perceptions of state control and affect toward the course instructor is indicative of the important role of the instructor in the classroom environment. Pearson r correlations were also computed regarding perceptions of anticipated student behaviors. Correlations between student perceptions of state control in the classroom and intentions to engage in course-recommended behaviors ($r=.26$, $p<.0001$), intentions to enroll in another course of similar content ($r=.20$, $p<.0003$), intentions to enroll in another course with the same instructor ($r=.26$, $p<.0001$), and total affect toward the course ($r=.36$, $p<.0001$) indicate a potential impact of present student perceptions of state control on future classroom-related behaviors. Again, a strong relationship between perceived state control and affect toward instructor is evident (See Table 1).

Hypothesis 2 was tested by correlational analyses and supported. Pearson r correlations indicate significant relationships between student perceptions of state control in the classroom and motivation to study course content on the first class day ($r=.21$, $p<.0001$) and motivation to study course content at the time of empirical assessment (midsemester: $r=.31$, $p<.0001$). In addition, student motivation to study course content on the first day is significantly related to motivation to study course content at midsemester ($r=.58$, $p<.0001$).

Hypothesis 3 was tested by correlational analyses and supported. Pearson r correlations between student perceptions of state control in the classroom and the amount of content learned in the class ($r=.36$, $p<.0001$) and the amount of learning loss anticipated ($r=.42$, $p<.0001$) indicate significant

relationships. Specifically, as perceptions of state control increase, the amount of content learned increases and anticipated learning loss decreases (See Table 1).

Results from these hypotheses indicate significant relationships between student perceptions of state control in the classroom and learning in the classroom. Given this relationship, it is logical to identify factors related to student perceptions of state control in the classroom.

Research question 1 probed the possible impact of student trait perceptions of control on student state perceptions of control in the classroom. A Pearson χ correlation between trait control and state control ($r=.25$, $p<.0001$) indicated a significant relationship accounting for 6.3% of the variance in state control ($F=2.12$, $p<.0001$). This result suggests that state perceptions of control in the classroom are partially influenced by student trait perceptions of control prior to entering the college classroom environment. However, a considerable portion of the variance in state perceptions of control in the classroom has not been accounted for and may likely be impacted by variables within the classroom environment (See Table 1).

Research question 2 probed the possible impact of instructor immediacy variables on student perceptions of state control in the classroom. Significant Pearson χ correlations were obtained between student perceptions of state control in the classroom and the perceived frequency of instructor eye contact with the class while lecturing ($r=.12$, $p<.03$), instructor smiling at the entire class ($r=.24$, $p<.0001$), instructor use of a relaxed body position while in class ($r=.15$, $p<.007$), instructor smiling at individual students during class ($r=.18$, $p<.002$) and student perceptions of total

instructor immediacy ($r=.17$, $p<.003$). These results indicate significant relationships between specific instructor immediacy behaviors, overall instructor immediacy, and student perceptions of state control in the classroom (See Table 2). A multiple regression of these five significantly correlated variables as predictors of state perceptions of control in the classroom indicated an overall significant relationship ($p<.0008$) accounting for 6.7% of the variance in state perceptions of control in the classroom.

Research question 3 probed the possible relationship between instructor learning aids and student perceptions of state control in the classroom. Significant Pearson r correlations were demonstrated between student perceptions of state control in the classroom and the perceived importance of instructor demonstration of enthusiasm toward presenting content ($r=.16$, $p<.01$), instructor demonstration of interest in student acquisition of course content ($r=.18$, $p<.003$), instructor criticism of student achievement ($r=.26$, $p<.003$), and instructor use of a course syllabus ($r=.16$, $p<.007$). These results indicate significant relationships between student perceptions of state control in the classroom and specific instructor learning aids in the classroom (See Table 2). A multiple regression of these four significantly correlated variables as predictors of state perceptions of control in the classroom yielded an overall nonsignificant relationship.

Research question 4 probed the possible relationship between teacher communication style variables and student perceptions of state control in the classroom. Significant Pearson r correlations were obtained between student perceptions of state control in the classroom and perceived instructor assertiveness ($r=.13$, $p<.02$), perceived instructor responsiveness ($r=.22$, $p<.0001$), and perceived instructor versatility ($r=.21$, $p<.0002$). These

results indicate significant relationships between perceptions of specific instructor classroom behaviors and student perceptions of state control in the classroom (See Table 2). A multiple regression of these three significantly correlated variables as predictors of state perceptions of control in the classroom yielded an overall significant relationship ($F=5.95$, $p<.0006$) accounting for 5.4% of the variance in state perceptions of control in the classroom.

A multiple regression analysis of the twelve significantly correlated variables from research questions 2-4 as predictors of student perceptions of state control in the classroom indicate an overall nonsignificant relationship ($p<.16$) accounting for 17% of the variance in state perceptions of control. However, a multiple regression analysis of these twelve variables combined with student perceptions of trait control, attributions of success due to effort, context, and luck and attributions of failure due to context as predictors of student perceptions of state control in the classroom indicate an overall significant relationship ($p<.04$) accounting for 28% of the variance in student perceptions of state control in the classroom.

A multiple regression with the twelve variables significantly related to learning (from research questions 2-4) and state control as predictors and cognitive learning as the dependent variable indicated a significant relationship ($F=3.05$, $p<.001$, $R^2=.321$) with perceptions of instructor assertiveness and the perceived importance of instructor interest in student learning accounting for unique variance ($R^2=.029$ and .055, respectively).

A multiple regression analysis (R^2 procedure) with the same thirteen predictor variables and cognitive learning as the dependent variable produced a twelve variable model (all except student perceptions of instructor

versatility) accounting for 32.1% of the variance in cognitive learning [$C(P)=12.0004$].

A multiple regression of these same thirteen predictor variables with learning loss as the dependent variable yielded a significant relationship accounting for 32.1% of the variance in learning loss ($F=2.73$, $p<.003$).

A series of multiple regression analyses were conducted with these thirteen predictor variables and affective learning variables as the dependent variables. Significant relationships were demonstrated with affect toward course content ($F=2.56$, $p<.005$, $R^2=.284$), affect toward recommended course behaviors ($F=4.11$, $p<.0001$, $R^2=.389$), affect toward the course instructor ($F=5.8$, $p<.001$, $R^2=.473$), affect toward engaging in recommended course behaviors ($F=2.06$, $p<.03$, $R^2=.241$), affect toward enrolling in another course of similar content ($F=2.54$, $p<.005$, $R^2=.282$), affect toward enrolling in another course with the same instructor ($F=2.39$, $p<.009$, $R^2=.27$) and total affect toward the course ($F=4.05$, $p<.0001$, $R^2=.386$).

A series of multiple regression analyses were conducted with these thirteen predictor variables as predictors and student motivation to learn as the dependent variable. Significant relationships were demonstrated with MOTA (student motivation to study course content on the first class day: $F=2.11$, $p<.02$, $R^2=.245$) and MOTB (student motivation to study course content at midsemester: $F=4.96$, $p<.0001$, $R^2=.434$).

Student motivation. MOTA was significantly correlated with attributions of failure due to effort ($r=.11$, $p<.05$), attributions of failure due to luck ($r=-.16$, $p<.003$), attributions of success due to effort ($r=.13$, $p<.02$) and attributions of success due to context ($r=-.13$, $p<.02$). MOTB was significantly correlated with attributions of failure due to effort ($r=.13$,

p<.02) and attributions of failure due to luck ($r=.14$, p<.01). Attributions of failure due to context were significantly correlated with the change in student motivation from MOTA to MOTB ($r=.12$, p<.03). Multiple regression analyses indicated that the eight subscales were significantly related to MOTA ($F=2.55$, p<.01, $R^2=.062$) but not with MOTB.

In the following analyses all levels of significance are .0001 unless otherwise specified. MOTA was significantly correlated with overall cognitive learning ($r=.47$) as was MOTB ($r=.61$). Other significant Pearson r correlations were demonstrated with learning loss (MOTA: $r=-.24$; MOTB: $r=-.43$), affect toward course content (MOTA: $r=.67$; MOTB: $r=.58$), affect toward recommended course behaviors (MOTA: $r=.60$; MOTB: $r=.55$), affect toward course instructor (MOTA: $r=.30$; MOTB: $r=.57$), affect toward engaging in the recommended course behaviors (MOTA: $r=.46$; MOTB: $r=.47$), affect toward enrolling in another course of similar content (MOTA: $r=.52$; MOTB: $r=.54$), affect toward enrolling in another course with the same instructor (MOTA: $r=.34$; MOTB: $r=.54$) and total affect toward the course (MOTA: $r=.52$; MOTB: $r=.54$: See Table 3). Tests for differences between independent correlations (Brunig & Kintz, 1977) were conducted for each of the above student motivation relationships. Significantly increased correlations were demonstrated for cognitive learning ($t=3.46$, p<.001), learning loss ($t=2.91$, p<.01), affect toward the course instructor ($t=5.7$, p<.001), affect toward enrolling in another course with the same instructor ($t=4.01$, p<.001) and total affect toward the course ($t=2.42$, p<.02). A significantly decreased correlation was demonstrated for affect toward course content ($t=2.05$, p<.05). All other variables exhibited nonsignificant relationships.

Instructor variables were also significantly related to student

motivation. Significant Pearson χ^2 correlations were demonstrated for the perceived frequency of instructor use of gestures (MOTA:r=.17, $p<.003$), instructor use of touch (MOTB:r= .12, $p<.03$), instructor use of a monotone voice (MOTA: $r=-.11$, $p<.05$; MOTB:r= .30), instructor use of eye contact (MOTA:r=.13, $p<.02$; MOTB:r=.24), instructor smiling at the entire class (MOTA:r=.18, $p<.002$; MOTB:r=.29), instructor use of body movement during class (MOTA:r=.13, $p<.02$; MOTB:r=.16, $p<.005$), instructor smiling at individuals (MOTA:r=.15, $p<.01$; MOTB:r=.19, $p<.001$), instructor use of vocal variety (MOTB:r=.26), student perceptions of total instructor immediacy (MOTA:r=.15, $p<.009$; MOTB:r=.31), the perceived importance of instructor use of instructional materials and/or activities (MOTB:r=.25), instructor enthusiasm toward course content (MOTA:r=.21, $p<.001$; MOTB:r=.20, $p<.002$), instructor presentation of content clearly (MOTB:r=.20, $p<.002$), instructor interest in student learning (MOTA:r=.40, MOTB:r=.44), instructor encouragement of student questions and/or comments (MOTA:r=.18, $p<.003$; MOTB:r=.30), instructor response to student questions and/or comments (MOTA:r=.22; MOTB:r=.28), instructor use of objectives (MOTA:r=.25; MOTB:r=.30), instructor criticism of student achievement (MOTA:r=.25, $p<.004$; MOTB:r=.41), student perceptions of instructor assertiveness (MOTA:r=.19, $p<.0006$; MOTB:r=.36), student perceptions of instructor responsiveness (MOTA:r=.22; MOTB:r=.35) and student perceptions of instructor versatility (MOTA:r=.23; MOTB:r=.38: See Table 2).

DISCUSSION

The purpose of this section is to offer interpretations and examine the implications of the obtained results. This discussion will assess the relationship of instructor behaviors in the classroom to student perceptions

of control in the classroom with a subsequent relationship to student motivation and cognitive and affective learning. This section will conclude noting future research concerns.

Control in the Classroom

Results of this study indicate that student perceptions of state control in the classroom are significantly related to both affective and cognitive learning. Direct positive relationships indicate that, as perceptions of state control increase, perceptions of affect toward course, course content, and course instructor increase. As perceptions of state control increase, cognitive learning in the classroom increases, accounting for 13% of the variance in cognitive learning. In addition, as perceptions of state control increase, learning loss decreases, accounting for 18% of the variance in learning loss. Finally, the relationship between student perceptions of state control and student motivation to study course content increases from the first class day to midsemester.

Given the existence of a direct relationship between student perceptions of state control in the classroom and student learning and motivation to learn, it is imperative to identify variables that significantly contribute to student perceptions of state control.

The amount of trait control a student perceives prior to entering the classroom is directly related to student perceptions of state control. Trait control is positively related to attributions of success due to effort and ability. Trait control is negatively correlated with attributions of failure due context and luck and attributions of success due to context and luck. These results make sense. If a student has success through ability or effort, both internal factors, perceptions of trait control will increase. On the

other hand, failure or success due to external (and uncontrollable) factors such as context and luck, should decrease perceptions of trait control. All eight subscales of the MMCS were significantly related to student perceptions of trait control accounting for 11.2% of the variance in trait control. In turn, trait control, together with the eight subscales, account for 10.2% of the variance in student perceptions of state control in the classroom. These results suggest that attributions of achievement based upon past performance are significant contributors to student perceptions of state control in the classroom, even in light of the limitations discussed earlier regarding trait measurement.

State perceptions of control in the classroom are also directly related to specific instructor behaviors in the classroom. Results indicate that the perceived frequency of instructor eye contact with the class, instructor smiling at the entire class, instructor use of a relaxed body position, instructor smiling at individual students during class and student perceptions of total instructor immediacy as well as the perceived importance of instructor enthusiasm toward content, instructor interest in student learning, instructor criticism of student achievement, instructor use of a syllabus, and student perceptions of instructor assertiveness, responsiveness, and versatility are all directly related to student perceptions of state control. Taken together, these variables account for 17% ($p<.16$) of the variance in state control. These twelve state variables, together with the significantly related trait attribution variables, account for 28% of the variance in state control ($p<.04$). In addition, a multiple regression analysis of these twelve variables and state control predicting cognitive learning accounted for 32.1% of the variance in cognitive learning. A multiple regression analysis of

these same variables predicting affective learning accounted for 38.6% of the variance in affective learning.

The implications of these results are that 1) state control is directly related to student cognitive and affective learning and student motivation to learn, and 2) specific instructor classroom behaviors are directly related to student perceptions of state control in the classroom. Therefore, a strong argument can be advanced that specific instructor classroom behaviors are indirectly related to student affective and cognitive learning and student motivation to learn through student perceptions of state control in the classroom. In other words, as specific instructor classroom behaviors increase student perceptions of control in the classroom, subsequent increases in student affective and cognitive learning and student motivation are realized.

Although trait attributions are significantly related to student perceptions of state control in the classroom, the strength of their relationship to state perceptions of control is cause for further discussion. One theoretical expectation in this study was that trait attributions of control in the classroom would be significantly related to uncontrollability in the classroom and the resultant motivational, affective, and cognitive deficits. The variance in state perceptions of control in the classroom not accounted for by trait attributions might be attributable to state variables. While the behavioral deficits were demonstrated and their relationship to control significant, the role of trait attributions as predictors of state control was less than anticipated. The results of this study suggest that state variables play a more significant ^{role} than trait variables as related to student perceptions of state control in the college classroom.

A second theoretical expectation in this study was that student learned helplessness, based on previous classroom experiences, would impact trait attributions of control in the classroom. However, the current data suggest that learned helplessness has only a small impact. Subjects self-reported a range of trait perceptions of control from 20 to 100 [a possible range from 0 (no control) to 100 (complete control)] with a sample mean of 80.08. While the self-report measure of trait perceptions of control has not received previous empirical validation, one would logically anticipate a lower mean score for trait perceptions of control in a normal distribution. The implication of this data is that few subjects perceive low control based on previous classroom experiences. One reason for the existence of only a small number of trait helpless individuals at the college level may be that high school students encountering helpless classroom experiences choose not to pursue a college career. In fact, these results suggest that, while state helplessness is occurring at the college level (low perceived state control scores), very little "learned" helplessness is carried over from past educational experiences.

A final possibility for poor trait attribution results may be due to the low reliability of the MMCS. This measure is in need of revision and reformulation and may be attributing to the overall low variance accounted for by trait attributions.

Based upon these interpretations and implications, this study must focus upon instructor behaviors in the classroom and their relationship to student perceptions of control in the classroom. While the behavioral deficits associated with environmental uncontrollability continue to play a significant

role in this study, the usefulness of the learned helplessness theory has been minimized.

Motivation in the Classroom

Trait perceptions of control demonstrated significant relationships to student motivation to study course content. MOTA was positively correlated with attributions of failure due to lack of effort and attributions of success due to effort. MOTA was negatively correlated with attributions of failure due to luck and attributions of success due to context. Students perceiving that they have no control over their achievement may have little motivation to study hard to achieve better grades. Employing a multiple regression analysis, the eight attribution subscales significantly predicted MOTA but were unrelated to MOTB. This suggests that trait attributions of past achievement will impact motivation to study course content on the first class day, but at midsemester, the state idiosyncrasies of the class play a stronger role in predicting student motivation.

Cognitive learning is positively correlated with MOTA and demonstrates a stronger correlation with MOTB, indicating an impact of state variables, over time, to significantly increase student motivation. Significantly increased correlations from MOTA to MOTB were demonstrated for learning loss, affect toward the instructor, affect toward enrolling in another course with the same instructor and total affect toward the course. A significantly decreased correlation was demonstrated for affect toward course content. Affect toward the course instructor, moreso than the actual course content, seems to play an important role in enhancing student motivation to study course content over time. Based upon these results, the likelihood exists that specific state variables are affecting changes in student motivation to study course content.

Increases in student motivation from the first class day to midsemester were correlated with the perceived importance of instructor interest in student learning, instructor use of objectives, instructor demonstration of enthusiasm for the content, instructor encouragement of student questions and/or comments, instructor response to student questions and/or comments, and instructor criticism of student achievement. Increases were also correlated with perceived instructor use of eye contact, instructor movement around the classroom, instructor smiling at the entire class and at individual students during class, the perceived low frequency of instructor use of a monotone voice, and student perceptions of total instructor immediacy. Increases from MOTA to MOTB were correlated with student perceptions of instructor assertiveness, responsiveness, and versatility. These results indicate significant relationships regarding specific instructor learning aids, specific instructor immediacy behaviors, and teacher communication style with student motivation to study course content as the semester progresses. Given that MOTA and MOTB are significantly related to cognitive and affective learning, another important indirect relationship is evident. Instructor variables and behaviors in the classroom are directly related to student motivation which is directly related to cognitive and affective learning. The result is the indirect enhancement of learning by specific instructor variables through student motivation to study course content.

Other variables correlating only with MOTB but related to motivation are the perceived frequency of instructor use of gestures, instructor use of body movement, instructor use of vocal variety, instructor use of touch, the perceived importance of instructor use of materials and/or activities, and instructor presentation of content clearly. As can be seen, these variables

take time to develop an impact and would likely have little effect at MOTA while their relationship to MOTB is significant and related to affective learning.

Summation of Results

The results of this study, although exclusively correlational, indicate a significant relationship between student perceptions of instructor behaviors in the classroom and student perceptions of control in the classroom. In turn, significant relationships exist between student perceptions of control in the classroom and student learning and motivation behaviors. The indirect relationship between specific instructor behaviors and student learning and motivation to learn is strong and worthy of continued investigation. The theoretical foundation of this study has been marginally supported. The relationship between student perceptions of state control and student learning and motivation to learn is ^{reflects} reflective of learned helplessness theory. As perceptions of uncontrollability increase (a decrease in state control), corresponding decreases in cognitive, affective, and motivational behaviors are demonstrated. Based upon the results of this study, the argument that specific instructor behaviors are related to perceptions of uncontrollability and helplessness in students with a resulting relationship to student cognitive and affective learning and student motivation can be advanced. However, as discussed earlier, the role of learned helplessness should be minimized (in this study) but the importance of uncontrollability and the resulting behavioral deficits should be strongly considered.

Instruction in the Classroom

What do these results mean for the average college instructor? The intention of this section is to discuss these results collectively for use in

the college classroom.

Summarily, these results suggest that, verbally and nonverbally, the college classroom instructor plays a significant role in the learning process, not only by delivering content but through influencing both student perceptions of control in the classroom and student motivation to study course content. The instructor who successfully promotes cognitive and affective learning in the college classroom is one who utilizes positive immediacy behaviors such as eye contact, smiling, relaxed posture, and vocal variety and chooses not to use negative immediacy behaviors such as a monotone voice, tense posture, and lecturing behind a desk or podium. Results of this study suggest that as student perceptions of positive instructor immediacy behaviors increase, student motivation and perceptions of state control increase, with relative increases in cognitive and affective learning.

The instructor who successfully promotes cognitive and affective learning is one who utilizes instructor learning aids to supplement the classroom educational experience. The successful instructor uses instructional materials and activities as well as goals or objectives and a course syllabus. In addition, the successful instructor provides clear content, displays enthusiasm toward the content, and demonstrates interest in student learning through encouraging and responding to student questions and/or comments and criticizing student achievement. Results from this study suggest that these instructor learning aids, when utilized, are significantly related to higher levels of student cognitive and affective learning.

Finally, the instructor who successfully promotes cognitive and affective learning is perceived as assertive, responsive, and versatile. This instructor is perceived as knowledgeable and in control, yet flexible and

understanding. This instructor makes students feel comfortable in a learning environment.

While these implications may be describing a "Super-Instructor", the intention is to enlighten the academic community as to positive and negative instructor classroom behaviors from the student's perspective. It may be impossible for one instructor to execute each of the above behaviors, but incorporating as many as possible or, at least, more positive behaviors than negative behaviors in the classroom, should prove beneficial to overall learning.

Future research should be concerned with a number of issues raised in this study. The first area of interest concerns modification of the MMCS. The scale is unidentifiable along the three dimensions proposed by the original authors. Although each dimension exists, confusion between items has reduced the internal reliability of the instrument. Even the eight subscales employed in this study could use reliability strengthening through item adjustment or removal. This scale offers much potential for assessing achievement attributions, but must be restructured.

Replication of the procedures of this study would provide validity for the present results. Concern must be given to the issue of learned helplessness theory as a predictor of trait attributions of control in the classroom. Future research should investigate the usefulness of this theory in both college classrooms and high school classrooms. The possibility exists that learned helplessness is influential, but only at the high school level or junior high school level. Replication of this study at different universities and in different learning environments will expand upon these findings.

Finally, establishment of a causal relationship between instructor

behaviors and student learning is essential. While the demonstration of significant correlations is useful, concrete evidence of causation will intensify our understanding of the impact of uncontrollability in the classroom and the significant role played by the instructor in this environment.

REFERENCES

Abrami, P.C., Leventhal, L., & Perry, R.P. (1982). Educational seduction. Review of Educational Research, 52, 446-464.

Abramson, L.Y., Seligman, M.E.P., & Teasdale, J. (1978). Learned helplessness in humans: Critique and reformulation. Journal of Abnormal Psychology, 87, 49-74.

Adams, B.J. & Dewson, M.R.J. (1982). Effects of locus of control on induction of learned helplessness. Psychological Reports, 51, 599-606.

Alloy, L.B., Peterson, C., Abramson, L.Y., & Seligman, M.E.P. (1984). Attributional style and the generality of learned helplessness. Journal of Personality and Social Psychology, 46, 681-687.

Ames, C. (1981). Competitive versus cooperative reward structures: The influence of individual and group performance factors on achievement attributions and affect. American Educational Research Journal, 18, 273-287.

Andersen, J.F. (1978). The relationship between teacher immediacy and teacher effectiveness. Unpublished doctoral dissertation, West Virginia University.

Andersen, J.F. (1979). Teacher immediacy as a predictor of teaching effectiveness. In D. Nimmo (Ed.), Communication Yearbook 3 (pp.543-560). New Brunswick, NJ:Transaction Books.

Andersen, J.F., Andersen, P.A., & Jensen, A.D. (1979). The measurement of immediacy. Journal of Applied Communication Research, 7, 153-180.

Andersen, J.F., Norton, R.W., & Nussbaum, J.F. (1981). Three investigations exploring the relationship between perceived teacher communication behaviors and student learning. Communication Education, 30, 377-392.

Anderson, C.A. (1983). Motivational and performance deficits in interpersonal settings: The effect on attributional style. Journal of Personality and Social Psychology, 45, 1136-1147.

Anderson, C.A., Anderson, K., Fleming, D.E., & Kinghorn, E. (1984). A multidimensional test of the attribution reformulation of learned helplessness. Bulletin of the Psychonomic Society, 22, 211-213.

Andriate, G.S.. (1980). The relationship of status, solidarity with instructor, and student anxiety proneness to three learning outcomes. Unpublished doctoral dissertation, West Virginia University.

Argyris, C. (1957). Personality and organization. N.Y.: Harper and Row.

Bandura, A. (1977). Social learning theory. Englewood Cliffs, NJ: Prentice-Hall.

Bar-tal, D. (1978). Attributional analysis of achievement-related behavior. Review of Educational Research, 48, 259-271.

Beatty, M.J. (1986). The romantic dialogue: Communication in dating and marriage. Englewood Cliffs, NJ: Morton Publishing Company.

Beatty, M.J., Forst, E.C., & Stewart, R.A. (1986). Communication apprehension and motivation as predictors of public speaking duration. Communication Education, 35, 143-146.

Beatty, M.J. & Payne, S.K. (1985). Is cognitive differentiation loquacity? A motivational perspective. Human Communication Research, 11, 605-612.

Bell, R.A. & Daly, J.A. (1984). Affinity-seeking: Its nature and correlates. Paper presented at the annual convention of the International Communication Association, San Francisco.

Blauner, R. (1964). Alienation and freedom: The factory worker and his industry. Chicago: University of Chicago Press.

Bowman, P.J. (1984). A discouragement-centered approach to studying unemployment among black youth: "oplessness, attributions, and psychological stress. International Journal of Mental Health, 13, 68-91.

Brown, I., & Inouye, D.K. (1978). Learned helplessness through modeling: The role of perceived similarity in competence. Journal of Personality and Social Psychology, 36, 900-908.

Brunig, J.L., & Kintz, B.L. (1977). Computational handbook of statistics. Glenview, IL: Scott, Foresman, and Company.

Buchholz, S., Lashbrook, W.B., & Wenburg, J.R. (1975). Toward the measurement and processing of social style. Paper presented at the annual meeting of the International Communication Association, Chicago.

Buyx, G.M., & Winefield, A.H. (1982). Learned helplessness in high school students following experience of noncontingent rewards. Journal of Research in Personality, 16, 118-127.

Cherniss, C. (1980). Staff Burnout. Beverly Hills, CA: Sage.

Chung, Y., & Hwang, K. (1981). Attribution of performance and characteristics of learned helplessness in junior high school students. Acta Psychologica Taiwanica, 23, 155-164.

Collins, B.E. (1974). Four separate components of the Rotter I-E scale: Belief in a just world, a predictable world, a difficult world, and a politically responsive world. Journal of Personality and Social Psychology, 29, 381-391.

Collins, B.E., Martin, J.L., Ashmore, R.D., & Ross, I. (1973). Some dimensions of the internal-external metaphor in theories of personality. Journal of Personality, 41, 471-492.

Daly, J.A., & Stafford, L. (1984). Correlates and consequences of social-communicative anxiety. In, J.A. Daly and J.C. McCroskey (Eds.), Avoiding communication: Shyness, reticence, and communication apprehension (pp.125-144). Beverly Hills, CA: Sage.

Deaux, K., & Farris, E. (1977). Attributing causes for one's own performance: The effects of sex, norms, and outcome. Journal of Research in Personality, 11, 59-72,

Diener, C.J., & Dweck, C.S. (1980). An analysis of learned helplessness: II. The processing of success. Journal of Personality and Social Psychology, 39, 940-952.

Douglas, D., & Anisman, H. (1975). Helplessness or expectation incongruency: Effects of aversive stimulation on subsequent performance. Journal of Experimental Psychology: Human Perception and Performance, 1, 411-417.

Doyle, K.O. (1983). Evaluating teaching. Toronto, Canada: Lexington Books.

Doyle, M. (1984). Conquering discarded homemaker despair. Women and Therapy, 2(4), 69-76.

Dweck, C.S. (1975). The role of expectations and attributions in the alleviation of learned helplessness. Journal of Personality and Social Psychology, 31, 674-685.

Dweck, C.S. (1976). Children's interpretation of evaluative feedback: The effect of social cues on learned helplessness. In, C.S. Dweck, K.T. Hill, W.H. Reed, W.M. Steinman, and R.D. Parke, The impact of social cues on children's behavior. Merrill-Palmer Quarterly, 22, 83-123.

Dweck, C.S., & Bush, E.S. (1976). Sex differences in learned helplessness: I. Differential debilitation with peer and adult evaluators. Developmental Psychology, 12, 147-156.

Dweck, C.S., & Licht, B.G. (1980). Learned helplessness and intellectual achievement. In, J. Garber and M.E.P. Seligman (Eds.), Human Helplessness: Theory and Application (pp. 197-222). N.Y.: Academic.

Dweck, C.S., & Repucci, N.D. (1973). Learned helplessness and reinforcement responsibility in children. Journal of Personality and Social Psychology, 25, 109-116.

Etaugh, C. Brown, B. (1975). Perceiving the causes of success and failure of male and female performers. Developmental Psychology, 11(1), 103.

Feinberg, R.A., Miller, F.G., & Weiss, R.F. (1983). Verbal learned helplessness. Representative Research in Social Psychology, 18, 273-287.

Feldman, K.A. (1976). The superior college teacher from the student's view. Research in Higher Education, 5, 243-288.

Freimuth, V.S. (1976). The effects of communication apprehension on communication effectiveness. Human Communication Research, 2, 289-295.

Frey, P.W. (1978). A two-dimensional analysis of student ratings of instruction. Research in Higher Education, 9, 69-91.

Hanusa, B.H., & Schulz, R. (1977). Attributional mediators of learned helplessness. Journal of Personality and Social Psychology, 35, 602-611.

Harris, F.A., & Tryon, W.W. (1983). Some necessary and sufficient conditions for the experimental induction of learned helplessness. Journal of Social and Clinical Psychology, 1(1), 15-26.

Hiroto, D.S., & Seligman, M.E.P. (1975). Generality of learned helplessness in man. Journal of Personality and Social Psychology, 31, 311-327.

Kammer, D. (1983). Depression, attributional style, and failure generalization. Cognitive Therapy and Research, 7, 413-423.

Kearney, P., & McCroskey, J.C. (1980). Relationships among teacher communication style, trait and state communication apprehension and teacher effectiveness. In, D. Nimmo (Ed.), Communication Yearbook 4 (pp. 533-552). New Brunswick, NJ: Transaction Books.

Kearney, P., Plax, T.G., & Wendt-Wasco, N.J. (1985). Teacher immediacy for affective learning in divergent college classes. Communication Quarterly, 33, 61-74.

Kelley, H.H. (1971). Attribution in social interaction. Morristown, NJ: General Learning Press.

Kelly, G.A. (1955). The psychology of personal constructs. N.Y.: Morton.

Klein, D.C., Fencil-Morse, E., & Seligman, M.E.P. (1976). Learned helplessness, depression, and the attribution of failure. Journal of Personality and Social Psychology, 33, 11-26.

Klein, D.C., & Seligman, M.E.P. (1976). Reversal of performance deficits in learned helplessness and depression. Journal of Abnormal Psychology, 85, 11-26.

Knutson, P.K. (1979). Relationships among teacher communication style, trait and state communication apprehension and teacher effectiveness. Unpublished doctoral dissertation, West Virginia University.

Koller, P.S., & Kaplan, R.M. (1978). A two-process theory of learned helplessness. Journal of Personality and Social Psychology, 36, 1177-1183.

Lazarus, R.S. (1966). Psychological stress and the coping process. N.Y.: McGraw-Hill.

Lefcourt, H.M., van Baeyer, C.L., Ware, E.E., & Cox, D.J. (1979). The multidimensional-mutiattributional causality scale: The development of a goal specific locus of control scale. Canadian Journal of Behavioral Science, 11, 286-304.

Maier, S.F., & Seligman, M.E.P. (1976). Learned helplessness: Theory and evidence. Journal of Experimental Psychology: General, 105, 3-46.

Mandler, G. (1972). Helplessness: Theory and research in anxiety. In, C.D. Spielberger (Ed.), Anxiety: Current trends in theory and research, Vol.2 (pp. 79-112). N.Y.: Academic Press.

Masserman, J.H. (1943). Behavior and neurosis. Chicago: University of Chicago Press.

Masserman, J.H. (1971). The principle of uncertainty in Neurogenesis. In, H.D. Kimmel (Ed.), Experimental psychopathology (pp. 13-32). N.Y.: Academic Press.

Merril, D. (1974). Reference survey profile. Denver: Personal Predictions and Research, Inc.

Miller, L., Berg, J.H., & Archer, R.L. (1983). Openers: Individuals who elicit intimate self-disclosure. Journal of Personality and Social Psychology, 44, 1234-1244.

Morris, L.W., Harris, E.W., & Rovins, D.S. (1981). Interactive effects of generalized and situational expectancies on the arousal of cognitive and emotional components of social anxiety. Journal of Research in Personality, 15, 302-311.

Mortenson, D.C., Arnston, P.H., & Lustig, M. (1977). The measurement of verbal predisposition: Scale development and application. Human Communication Research, 3, 146-158.

Nussbaum, J.F., & Scott, M.D. (1979). Instructor communication behaviors and their relationship to classroom learning. In, D. Nimmo (Ed.), Communication Yearbook 3 (pp. 561-584). New Brunswick, NJ: Transaction Books.

Overmier, J.B. (1968). Interference with avoidance behavior: Failure to avoid traumatic shock. Journal of Experimental Psychology, 78, 340-343.

Perry, R.P., Abrami, P.C., & Leventhal, L. (1979). Educational seduction: The effect of instructor expressiveness and lecture content on student ratings and achievement. Journal of Educational Psychology, 71, 107-116.

Perry, R.P., & Dickens, W.J. (1984). Perceived control in the college classroom: Response-outcome contingency training and instructor expressiveness effects on student achievement and causal attributions. Journal of Educational Psychology, 76, 966-981.

Richmond, V.P., Gorham, J.S., & McCroskey, J.C. (1986). The relationship between selected immediacy behaviors and cognitive learning. Paper presented at the annual convention of the International Communication Association, Chicago.

Rosenfield, D., & Stephan, W.G. (1978). Sex differences in attributions for sex-typed tasks. Journal of Personality, 46(2), 244-259.

Rosenshine, B., & Furst, N. (1973). Research on teacher performance criteria. In, B.O. Smith (Ed.), Research in Teacher Education: A Symposium. Englewood Cliffs, NJ: Prentice-Hall.

Roth, S., & Bootzin, R.R. (1974). Effects of experimentally induced expectancies of external control: An investigation of learned helplessness. Journal of Personality and Social Psychology, 29, 253-264.

Roth, S., & Kubal, L. (1975). The effects of noncontingent reinforcement on tasks of differing importance: Facilitation and learned helplessness effects. Journal of Personality and Social Psychology, 32, 680-691.

Schutz, W.C. (1979). The interpersonal underworld. In, Harvard Business Review, On Human Relations (pp. 243-266). N.Y.: Harper and Row.

Seligman, M.E.P. (1978). Comment and integration. Journal of Abnormal Psychology, 87, 165-179.

Seligman, M.E.P., & Groves, D. (1970). Non-transient learned helplessness. Psychonomic Science, 19, 191-192.

Smith, R.E., & Watson, J.G. (1975). Social anxiety and the evaluation of negative interpersonal feedback. Journal of Consulting and Clinical Psychology, 43, 429-439.

Stake, J.E. (1976). The effect of information regarding sex group performance norms on goal-setting in males and females. Sex Roles, 2(1), 23-28.

Stedry, A.C., & Kay, E. (1966). The effects of goal difficulty on performance. Behavioral Science, 11, 459-470.

Tennen, H., & Eller, S.J. (1977). Attributional components of learned helplessness and facilitation. Journal of Personality and Social Psychology, 35, 265-271.

Thornton, J.W., & Jacobs, P.D. (1972). The facilitating effects of prior inescapable/unavoidable stress on intellectual performance. Psychonomic Science, 26, 185-187.

Tiggemann, M. (1981). Noncontingent success versus noncontingent failure and learned helplessness. Journal of Psychology, 109, 233-238.

Tiggemann, M., Barnett, A., & Winefield, A.H. (1983). Uncontrollability versus perceived failure as determinants of subsequent performance deficits. Motivation and Emotion, 7, 257-268.

Trice, A.D. (1984). Number of types of training tasks and the generalizability of the learned helplessness effect. Journal of General Psychology, 110(2), 283-284.

Wang, M., & Stiles, B. (1976). An investigation of children's concept of self-responsibility for their school learning. American Educational Research Journal, 13, 159-179.

Weinberger, H.L., & Cash, T.E. (1982). The relationship of attributional style to learned helplessness in the interpersonal context. Basic and Applied Social Psychology, 3, 141-154.

Weiner, B. (1972). Theories of motivation: From mechanism to cognition. Chicago: Rand McNally.

Weiner, B. (1974). Attribution theory and achievement motivation. Morristown, NJ: General Learning Press.

White, R.W. (1959). Motivation reconsidered: The concept of competence.

Psychological Review, 66, 297-333.

Wortman, C.B., & Brehm, J.W. (1975). Responses to uncontrollable outcomes: An integration of reactance theory and the learned helplessness model. In, L. Berkowitz (Ed.), Advances in Experimental Social Psychology, Vol. 8 (pp. 278-332). N.Y.: Academic Press.

Table 1

Correlation Coefficients for Learning Variables and Trait and State Control

	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>
1. State Control	.25**	.28**	.35**	.37**	.26**	.20**	.26**	.30**	.21**	.31**	-.13*	.36**	-.03	-.42**
2. Trait Control	.09	.07	-.00	.04	-.00	.02	.04	.09	.03	.06	.13*	.05	-.09	
3. Aff:Content		.66**	.45**	.58**	.53**	.44**	.76**	.67**	.58**	.03	.55**	.25**	-.30**	
4. Aff:Behaviors			.50**	.54**	.45**	.43**	.73**	.60**	.55**	.00	.53**	.16**	-.35**	
5. Aff:Teacher 1				.43**	.38**	.79**	.78**	.30**	.57**	-.33**	.51**	-.02	-.56**	
6. Aff:Engaging					.53**	.34**	.73**	.46**	.47**	-.05	.48**	.18**	-.32**	
7. Aff:Enrolling						.47**	.77**	.52**	.54**	-.07	.43**	.20**	-.25**	
8. Aff:Teacher 2							.79**	.34**	.54**	-.26**	.47**	.01	-.48**	
9. Total Affect								.61**	.71**	-.17**	.64**	.16**	-.50**	
10. MOTA									.58**	.38**	.47**	.22**	-.24**	
11. MOTB										-.53**	.61**	.17**	-.43**	
12. Mot. Change											-.20**	.03	.24**	
13. Cog. Lng.												.40**	-.65**	
14. Cog. Lng. Ideal													.28**	
15. Learning Loss														

*p<.05

**p<.01

Table 2

Correlation Coefficients for State Control and All Learning Variables with All Teacher Classroom Variables

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>
Sits behind desk	.02	.07	-.03	-.06	-.03	-.03	-.03	-.05	-.04	-.08	-.02	-.03	-.05
Gestures	.09	.12*	-.16**	.04	.17**	-.14*	.13*	.17**	.26**	.13*	.13*	.20**	.22**
Monotone voice	-.10	-.17**	.30**	-.11*	-.30**	.22**	-.14*	-.20**	-.43**	-.21**	-.18**	-.33**	-.33**
Eye contact	.12*	.18**	-.25**	.13*	.24**	-.14*	.15*	.21**	.33**	.20**	.17**	.26**	.29**
Smiles at class	.24**	.19**	-.22**	.18**	.29**	-.14*	.21**	.29**	.47**	.23**	.13*	.37**	.37**
Tense body position	.05	-.14*	-.23**	-.07	-.13*	.08	-.10	-.12*	-.26**	-.10	-.02	-.20**	-.17**
Touches students	.05	.08	-.08	.10	.12*	-.03	.12*	.11*	.10	.16**	.07	.09	.14*
Moves around class	.06	.12*	-.09	.13*	.16**	-.04	.13*	.13*	.24**	.16**	.08	.19**	.20**
Sits on desk/chair	.00	-.09	-.05	-.03	-.03	.00	-.02	-.05	-.06	-.08	-.07	-.07	-.08
Look at board/notes	.10	.08	-.12*	.09	.17**	-.11*	.12*	.16**	.15*	.18**	.09	.06	.16**
Stands behind desk	-.04	-.04	.02	-.05	-.03	-.01	-.06	-.06	-.04	-.01	-.03	-.01	-.04
Relaxed body	.15**	.09	-.26**	.05	.13*	-.10	.10	.16**	.38**	.13*	.09	.32**	.26**
Smiles at ind.	.18**	.07	-.12*	.15**	.19**	-.06	.10	.18**	.24**	.15**	.10	.23**	.22**
Vocal variety	.01	.14*	-.26**	.10	.26**	-.19**	.17**	.26**	.43**	.23**	.19**	.34**	.36**
Total immediacy	.17**	.22**	-.33**	.15**	.31**	-.19**	.20**	.29**	.49**	.27**	.16**	.38**	.39**
Clear content	-.08	.30**	-.13*	.08	.20**	-.14*	.15*	.11*	.18**	.08	.05	.17**	.16**
Use mat/act	.08	.30**	-.27**	.03	.25**	-.27**	.19**	.27**	.21**	.18**	.06	.21**	.23**
Teacher enthusiasm	.16**	.22**	-.15*	.21**	.20**	.00	.21**	.28**	.29**	.32**	.04	.14*	.25**
Interest stud. eng.	.18**	.49**	-.23**	.40**	.44**	-.08	.48**	.38**	.27**	.42**	.46**	.21**	.48**
Encourage student Q	.07	.25**	-.11*	.18**	.30**	-.16**	.20**	.29**	.26**	.19**	.22**	.19**	.29**
Respond student Q	.03	.25**	-.11*	.22**	.28**	-.08	.20**	.23**	.24**	.17**	.12*	.20**	.24**
Provide objectives	.12	.26**	-.15*	.25**	.30**	-.09	.25**	.28**	.15*	.24**	.22**	.14*	.27**
Provide criticism	.26**	.51**	-.47**	.25**	.41**	-.23**	.34**	.46**	.44**	.38**	.33**	.34**	.47**
Provide syllabus	.16**	.15*	-.15*	.02	.03	-.02	.05	.08	.10	.10	.01	.01	.07
Content difficulty	-.09	.06	.05	-.02	-.08	.07	-.12*	-.10	-.06	-.13*	-.01	-.13*	-.11*
Teacher assert.	.13*	.29**	-.30**	.19**	.35**	-.20**	.28**	.36**	.48**	.29**	.26**	.39**	.45**
Teacher respons.	.22**	.25**	-.36**	.22**	.35**	-.17**	.28**	.32**	.53**	.33**	.20**	.39**	.44**
Teacher versatility	.21**	.21**	-.30**	.23**	.38**	-.19**	.26**	.30**	.56**	.25**	.17**	.48**	.44**

* p<.05

** p<.01

1=State Control

2=Cog. Learning

3=Learning Loss

4=MOTA

5=IOTB

6=Hot. Change

7=Aff:Content

8=Aff:Behaviors

9=Aff:Instructor 1

10=Aff:Engaging

11=Aff:Enrolling

12=Aff:Instructor 2

13=Total Affect

Table 3

Correlation Coefficients for Student Motivation and Learning

	MOTA	MOTB	Not. Change
Aff:Content	.67**	.58**	.03
Aff:Behaviors	.60**	.55**	.00
Aff:Teacher 1	.30**	.57**	-.33**
Aff:Engaging	.46**	.47**	-.05
Aff:Enrolling	.52**	.54**	-.07
Aff:Teacher 2	.34**	.54**	-.26**
Total Affect	.61**	.71**	-.17*
Cog. Lng.	.47**	.61**	-.20
Learning Loss	-.24**	-.43**	.24**

* p<.01

**p<.0001